

BIBLIOGRAPHICAL NOTICES.

The British Flora, comprising the Phænogamous or Flowering Plants and the Ferns. The 7th edition, with Additions and Corrections, &c. By Sir WILLIAM JACKSON HOOKER, K.H., D.C.L. &c. &c., and GEORGE A. WALKER ARNOTT, LL.D. &c. &c. Longman and Co. 1855. Pp. 618.

HAVING reviewed at considerable length the sixth edition of the 'British Flora,' we do not think it necessary to say much about the seventh. The plan of the work is unchanged, as are also for the most part the principles and opinions of its authors; nor have the last five years been by any means fruitful of discoveries in British botany. The remarks on species have frequently been abbreviated; many doubts have been more cautiously worded, and the imaginary grounds for them judiciously suppressed. Nearly every page still reminds us that we have to do with men more conversant with books and herbaria than with living uncultivated nature, who prefer tradition to observation, have a morbid horror of whatever is difficult to discover or to describe, and look down with something very like contempt on the habitual study of the vegetation of our own islands. But we are glad to recognize likewise sundry indications of an increasing disposition to do justice to the present race of botanists: and occasionally, as before, the Authors' extensive knowledge has enabled them to throw light on difficult questions, especially of synonymy. It is a pity that they have not examined more carefully the records of English periodical and other works. This remark applies particularly to the distribution of plants. They give so many localities that the omission of others in different districts destroys the value of their information as far as botanical geography is concerned. Mr. H. C. Watson's 'Cybele Britannica' alone (mentioned, by the way, in the Introduction) would have supplied many untoward omissions. We may mention in particular the case of the Cumberland habitat for *Lychnis alpina*, respecting which the old sceptical observation remains, though Mr. Daniel Oliver (Cyb. Brit. iii. 160) has lately verified its genuineness. Perhaps their rashness in dealing with the foreign distribution of plants as bearing on questions of British nativity may be excused by the comparative neglect with which this interesting subject has been treated: but it is strange that they do not see, as we formerly pointed out (vi. 383), that their argument against the nativity of *Thesium humile* would be equally valid against that of *T. humifusum*; and this is by no means a solitary case. On the subject of hybrids, their extreme anxiety to repudiate new species has led them into a curious inconsistency. In the Introduction (p. x.), Linnæus's maxim that no permanently fertile hybrids can be produced between truly distinct species is adopted, apparently on the authority of his *ipse dixit*; and from this maxim; in conjunction with Dr. Bell Salter's experiments respecting the supposed *Geum intermedium*, the specific identity of *G. rivale* and *G. urbanum* is deduced: whereas we are still told, in a note to the

genus *Rubus* (p. 122), that the Authors "are almost quite convinced" that the modern British supposed species (of the fruticose section) are all "mere varieties approaching on the one side to *R. idæus*, on the other to *R. saxatilis*, with both of which *many fertile and permanent hybrids may have been formed, and are still forming.*" Can it be that the next edition will exhibit Raspberries, Blackberries, and Stoneberries (if we may coin a name) as the α , β , and γ of one capricious bush? Surely this is carrying zeal against neomaniacs rather too far. In one case however we cannot refuse assent to the Authors' suspicions of hybridity;—we mean, that of the British *Rumex pratensis*: we have met with it in many places, but always sparingly, and in company with both *R. crispus* and *R. obtusifolius*.

It may be well to subjoin a few remarks on different species. The descriptions of the "varieties" of *Thalictrum minus* are considerably amended; but our Authors have an unhappy knack of omitting the most important characters of species which they wish to combine: thus in this case they do not allude to the direction of the branches of the panicle. A remark about *Ranunculus hederaceus* becoming *R. cœnosus* near Glasgow through an artificial rise of temperature deserves attention; but we suspect the true *R. cœnosus* was not seen there at all,—a solution applicable to many other cases. Of plants formerly combined, *Fumaria parviflora* and *Vaillantii*, *Linaria repens* and *sepium* (Allm.), *Sparganium natans* and *minimum*, *Triticum junceum* and *lacum* are separated with greater or less degrees of doubt. *Polygala austriaca*, [*Hypericum anglicum* or *hircinum*], *Achillea tanacetifolia*, [*Cicendia Candollei*], *Salix acutifolia*, *Epipogon Gmelini*, *Potamogeton trichoides*, *Naias flexilis*, *Gymnogramma leptophylla*, and *Polypodium alpestre* appear for the first time, some of them of course under a similar qualification: by some strange carelessness, *Allium triquetrum* and *Carex brizoides* are altogether omitted. The confusion among the *Violæ* is not yet quite removed: it is satisfactory to learn that our Authors meant by *V. lactea* in the 6th edition *solely* the plant which they now follow Mr. Babington in calling *V. stagnina*; but they are quite mistaken in supposing that what that gentleman calls its 'rhizoma' is altogether caused by the soil, for the narrow-leaved var. *lancifolia* of the allied species grows by its side with stems altered and elongated by the soil and yet quite different. New but unsatisfactory arguments are introduced to defend the misapplication of the name *V. canina*: if by that name Linnæus wholly or chiefly meant Smith's *V. flavicornis*, its English origin has nothing to do with the matter; it would be mere English obstinacy to suppose that our popular vernacular usage is to give the law to continental science. We confess we should not be unwilling to see the name (in its Latin form) dropped altogether. The short synopsis of *Rubi*, exhibiting Dr. Bell Salter's views five years ago, is reprinted verbatim in the body of the work. The account of the *Hieracia* has been revised and enlarged with the aid of notes and specimens from Messrs. Backhouse and Baker, but is still merely provisional: we gladly echo the wish that the former gentleman may speedily publish a full account of his views. The Authors "think

there can be no doubt that *Potamogeton flabellatus*, Bab., is what Chamisso and Schlechtendal consider the common form of *P. pectinatus*:" is it impertinent to ask whether they have ever seen Mr. Babington's plant at all? Again, have they any reason to believe that *Carex Davalliana* has been again found near Bath? It seems unquestionable that the former station was destroyed long ago, but it is here spoken of as if still existing. Once more, may we suggest that the remarks on the varieties of *Asplenium filix-femina* require correction? there is now an inextricable confusion of the present and the former wording.

We ought not to close this notice without again bearing witness to the richness of knowledge and courtesy of tone which distinguish the 'British Flora.' It may not be of absolute authority on controverted questions: but, besides acting as a useful check on those whose faults are of an opposite tendency, it supplies a large fund of valuable information not otherwise accessible.

PROCEEDINGS OF LEARNED SOCIETIES.

ROYAL SOCIETY.

April 26, 1855.—Sir Benjamin Brodie, Bart., V.P., in the Chair.

"Some Observations on the Ova of the Salmon, in relation to the distribution of Species; in a letter addressed to Charles Darwin, Esq., M.A., V.P.R.S. &c." By John Davy, M.D., F.R.SS. Lond. & Edinb.

In this paper the author describes a series of experiments on the ova of the Salmon, made with the intent of ascertaining their power of endurance under a variety of circumstances without loss of life, with the expectation suggested by Mr. Darwin, that the results might possibly throw some light on the geographical distribution of fishes.

The details of the experiments are given in five sections. The results obtained were the following:—

1. That the ova of the Salmon in their advanced stage can be exposed only for a short time to the air if dry, at ordinary temperatures, without loss of life; but for a considerable time, if the temperature be low, and if the air be moist; the limit in the former case not having exceeded an hour, whilst in the latter it has exceeded many hours.

2. That the vitality of the ova was as well preserved in air saturated with moisture, as it would have been had they been in water.

3. That the ova may be included in ice without loss of vitality, provided the temperature is not so low as to freeze them.

4. That the ova, and also the fry recently produced, can bear for some time a temperature of about 80° or 82° in water, without materially suffering; but not without loss of life, if raised above 84° or 85°.

5. That the ova and young fry are speedily killed by a solution